



DYSLEXIA: TESTING AND EVALUATION

When a child is struggling to read, someone will probably suggest that he or she be tested for dyslexia. What does it mean to be tested? You might think that of a test as something you take in an afternoon. Someone scores it and tells you how you did. *Evaluation* is a more accurate word to describe the process of determining if someone has dyslexia. The word *evaluation* encompasses identification, screening, testing, diagnosis, and all the other information gathering involved when the student, his or her family, and a team of professionals work together to determine why the student is having difficulty and what can be done to help.

Why is evaluation important?

An evaluation is the process of gathering information to identify the factors contributing to a student's difficulty with learning to read and spell. First, information is gathered from parents and teachers to understand development and the educational opportunities that have been provided. Then, tests are given to identify strengths and weaknesses that lead to a diagnosis and a tentative road map for intervention. Conclusions and recommendations are developed and reported.

When a student is having difficulties with reading and spelling, an evaluation is important for **three reasons**.

1. **Diagnosis** An effective evaluation identifies the likely source of the problem. It rules out other common causes of reading difficulties and determines if the student profile of strengths and weaknesses fit the definition of dyslexia.
2. **Intervention planning** An effective evaluation develops a focused remedial program. Students who have a specific learning disability in reading (dyslexia) need a specialized approach to reading instruction to make progress. It is crucial that this specialized instruction begin at the student's current level of reading skill development, rather than at the student's grade level. An effective evaluation helps parents and teachers see which specific skills are weak and where reading and spelling instruction should begin.
3. **Documentation** An effective evaluation documents the history of a student's learning disability. One purpose of this documentation is to determine eligibility for special services, including special education. Documentation is also important for obtaining accommodations on college entrance exams (ACT, SAT), in college, or in the workplace.

When should a child be evaluated?

It is possible to identify potential reading problems in young children even before the problems turn into reading failure. Screening tests, such as Predictive Assessment of Reading (PAR); Dynamic Indicators of Basic Early Literacy Skills (DIBELS); Texas Primary Reading Inventory (TPRI); and AIMSweb screening assessments, developed by researchers for those purposes should be used with all children in a school, beginning in kindergarten, to locate those students who are "at risk" for reading difficulty. Preventive intervention should begin immediately, even if dyslexia is suspected. How the child responds to supplementary instruction will help determine if special education services are justified and necessary.

Before second grade, it is more important to focus an evaluation on the precursors of reading development. Measures of language skills, phonological awareness, memory, and rapid naming are more suggestive of being at-risk for dyslexia among young children than are measures of word reading, decoding, and spelling. Therefore, measures of phonological awareness, memory, and rapid naming are typically included in Kindergarten and beginning first grade screening tests that can identify children who need targeted intervention to improve these critical skills so these children can meet grade-level benchmarks. Although there are many tests that may be used early (in Kindergarten and beginning of first grade) to assess beginning skills in reading and spelling, the standards for average achievement are generous. A child in late kindergarten or early first grade may only need to read a few letters and two or three common words to score well enough to reach a score of "average." Compared to other young learners, students with dyslexia may not seem to be "behind." Further, even if achievement is found to be low or poor it does

not explain why the child may not be learning as expected.

By January or February of first grade, tests of early word reading, decoding, and spelling begin to be useful in providing information about what the student has learned and what gaps in knowledge exist. This information may be used to plan instruction and guide ongoing assessment.

What should be included in the evaluation?

The following areas should be considered when carrying out an evaluation.

Background information

Information from parents and teachers tells us a lot about a student's overall development and pattern of strengths and weaknesses. Because dyslexia is genetically linked, a family history of dyslexia indicates that a student is more likely to have dyslexia. A history of delayed speech or language also puts a child at-risk for reading difficulties. It is important to know the types and length of time of any interventions the student has received at school, home, or through tutoring, as well as the student's response to the intervention. School attendance problems should be ruled out. A history of poor attendance, alone, can explain an identified weakness in skill development.

Intelligence

Until recently, an intelligence test was considered to be a necessary part of the evaluation because the diagnosis of a learning disability was based on finding a significant difference between IQ and reading skill. Poor achievement despite average or better intelligence was considered a key indicator. Current regulations no longer require that such a discrepancy be present when making a diagnosis. This change in the regulations came about because many studies have shown that intelligence is not the best predictor of how easily a student will develop written language (reading and spelling) skills. Instead, oral language abilities (listening and speaking) are considered the best predictors of reading and spelling.

A formal measure of intelligence is not always needed to document average intellectual abilities. For younger children, parent information about language development and teacher information about the child's ability to learn orally may indicate average intellectual abilities. For older students or adults, past achievement in school or work may indicate at least average intelligence.

Oral language skills

Oral language, simply stated, refers to our ability to listen to and understand speech as well as to express our

thoughts through speech. Oral language is made up of low-level skills, such as recognizing and making the sounds within our speech, and higher-level skills, such as getting meaning by listening to someone speak or creating sentences to express thoughts. Students with dyslexia typically have adequate higher-level language skills. Indicators of higher-level oral language skills include being able to understand an age-appropriate story and spoken directions, to carry on a conversation, and to understand and use words that are age appropriate. If a student has average higher-level oral language skills but much difficulty developing written language (reading and spelling) skills, the need for evaluation for dyslexia is recommended.

Although students with dyslexia usually have strong higher-level language skills, they typically have problems (a deficit) in low-level language skills (see following section "Phonological processing"). This deficit limits the ability to learn to read and spell using the sounds of the language. Young children with dyslexia often have delays in language development, but their higher-level language skills are usually age-appropriate by the time they enter school. Difficulties with higher-level language skills suggest a need for a language evaluation by a speech-language pathologist to rule out language impairment.

Word recognition

Word recognition is the ability to read single printed words. It is also called word reading or word identification. Tests of word recognition require that students read individual words printed in a list. The student is not able to use cues, such as the meaning of a sentence, to help them figure out the word. Tests of word recognition that score both accuracy and the time it takes for the student to read the words (fluency) are particularly useful. Students with dyslexia often become accurate but are still very slow when reading words. Both accuracy and the speed of word reading can affect understanding what is read.

Decoding

Decoding is the ability to read unfamiliar words by using letter-sound knowledge, spelling patterns and chunking the word into smaller parts, such as syllables. Decoding is also called "word attack". Decoding tests should use nonsense words (words that look like real words but have no meaning, such as *frut* or *crin*) to force the student to rely on these decoding skills rather than on memory for a word already learned.

Spelling

Tests of spelling measure the student's ability to spell individual words from memory using their knowledge

of, for example, letter-sound pairings, patterns of letters that cluster together to spell one sound (*igh* in high; *oa* in boat), the way plurals may be spelled (s, es, ies) and so on. Spelling is the opposite of word attack but is even more difficult. It requires separating out the individual sounds in a spoken word, remembering the different ways each sound might be spelled, choosing one way, writing the letter(s) for that sound and doing the same, again, for the next sound in the word. Spelling stresses a child's short and long-term memory and is complicated by the ease or difficulty the child has in writing the letters, legibly and in the proper order. Spelling is usually the most severe weakness among students with dyslexia and the most difficult to remedy.

Phonological processing

Phonology is one small part of overall language ability. It is a low-level language skill in that it does not involve meaning. Phonology is the “sound system” of our language. Our spoken language is made up of words, word parts (such as syllables), and individual sounds (phonemes). We must be able to think about, remember, and correctly sequence the sounds in words in order to learn to link letters to sounds for reading and spelling. Good readers do this automatically without conscious effort. However, students with dyslexia have difficulty with identifying, pronouncing, or recalling sounds. Tests of phonological processing focus on these skills.

Automaticity/fluency skills

Students with dyslexia often have a slow speed of processing information (visual or auditory). Tasks measure Naming Speed (also called Rapid Automatic Naming). Sets of objects, colors, letters, and numbers are often used. These items are presented in rows on a card, and the student is asked to name each as quickly as possible. Naming speed, particularly letter naming, is one of the best early predictors of reading difficulties. Therefore, it is often used as part of screening measures for young children. Slow naming speed results in problems with developing reading fluency. It also makes it difficult for students to do well on timed tests. Students with both the naming speed deficit and the phonological processing deficit are considered to have a “double deficit.” Students with the double deficit have more severe difficulties than those with only one of the two.

Reading comprehension

Typically, students with dyslexia score lower on tests of reading comprehension than on listening comprehension because they have difficulty with decoding and accurately or fluently reading words. It is important, however, to be aware that students with dyslexia often

have strong higher-level oral language skills and are able to get the main idea of a passage despite difficulty with the words. Further, reading comprehension tasks usually require the student to read only a short passage to which they may refer when finding the answers to questions. For these reasons, students with dyslexia may earn an average score on reading comprehension tests but still have much difficulty reading and understanding long reading assignments in their grade-level textbooks.

Vocabulary knowledge

It is important to test vocabulary knowledge, because vocabulary greatly affects understanding when listening or reading. Difficulties students with dyslexia might have had in learning language or with memory can affect the ability to learn the meanings of words (vocabulary). Independent reading is also an important means for developing new vocabulary. Poor readers, who usually read less, are likely to have delays in vocabulary development. It is important to note, however, that students with dyslexia may perform poorly on reading vocabulary tests because of their decoding problems and not because they don't know the meaning of some words. For this reason, it is best to administer both a reading and listening vocabulary task to get a true measure of vocabulary knowledge.

The profile of strengths and weaknesses of an individual with dyslexia varies with age, educational opportunity and the influence of co-occurring factors such as emotional adjustment, ability to pay attention in learning situations, difficulties with health or motivation. Nevertheless, clusters of distinguishing characteristics are frequently noted.

Family History and Early Development

- Reports of reading/spelling difficulties across generations in the family
- Normal prenatal and birth history
- Delays/difficulties acquiring speech/language

Early Childhood/Primary Grades

- Difficulty with rhyming, blending sounds, learning the alphabet, linking letters with sounds
- Difficulty learning rules for spelling—spell words the way they sound (e.g., *lik* for *like*); use the letter name to code a sound (*lafunt* for *elephant*)
- Difficulty remembering “little” words—the, of, said—that cannot be “sounded out”
- Listening comprehension is usually better than reading comprehension—may understand a

story when read to him but struggles when reading the story independently.

Middle and Secondary School

- Reluctant readers
- Slow, word-by-word readers; great difficulty with words in lists, nonsense words and words not in their listening vocabulary
- Very poor spellers—miscode sounds, leave out sounds, add or leave out letters or whole syllables
- Non-fluent writers—slow, poor quality and quantity of the product
- When speaking, may have a tendency to mispronounce common words (floormat for format); difficulty using or comprehending more complex grammatical structures
- Listening comprehension is usually superior to performance on timed measures of reading comprehension (may be equivalent when reading comprehension measures are untimed)
- Weak vocabulary knowledge and use

Outcomes of an evaluation

An evaluation should result in a written report. This report should detail the kinds of information collected. This includes information related to the family literacy history, any significant medical issues the child may have, prenatal and birth conditions, and preschool development, including language learning. The education history should include information on school attendance, tests administered and test scores. These scores should be stated as standard scores. Standard scores compare the learner to others of the same age or grade. This material should provide the framework for the detailed evaluation of relative strengths and weaknesses across the various skill areas assessed as well as the overall fit of all information with the typical profile of dyslexia for the child's age. This should lead to a tentative diagnosis that states that the child's ability to learn to read, write and spell does or does not appear to be related to dyslexia. The specific evidence that supports the diagnosis should be explained in the report.

Diagnosis

A diagnosis of dyslexia begins with the gathering of information gained from interviews, observations and testing. This information may be collected by various members of a team that includes including the classroom teacher(s), speech/language pathologist, educational assessment specialist(s), and medical personnel (if co-

occurring difficulties related to development, health or attention are suspected).

The task of relating and interpreting the information collected should be the responsibility of a professional who is thoroughly familiar with the important characteristics of dyslexia at different stages in the development of literacy skills. This professional should also have knowledge of the influence of language development and behavior on literacy learning. Often, school psychologists and/or speech-language pathologists are responsible for this task.

CAUTION: An initial diagnosis of dyslexia should be offered only as a tentative conclusion based on the data available. A poor reader may appear to “fit the profile” of dyslexia. However, if the learner responds quickly to appropriate intervention, the source of the reading problem is more likely related to earlier educational opportunity than to problems in the child's physical makeup that limit the ability to learn from the instruction provided. The ability of the learner to benefit from instruction that is focused on the basic skills that support reading and spelling provides valuable information necessary to support or reject the initial diagnosis.

Intervention planning

Finally, the report should identify instructional programs that appear to be appropriate in meeting the specific skill(s) gaps and weaknesses identified through the evaluation process. Many children have already mastered some beginning reading skills. Thus, it is not always necessary or reasonable for a child to be placed in the very beginning lessons of a program. Although some programs have a placement test which helps the teacher to know where instruction should begin, many do not. For this reason, information about the child's specific skill needs should be detailed in the report to assist in identifying the starting point for instruction. Recommended programs or intervention strategies should be consistent with the types of content and methods that research has shown to be effective for students with dyslexia and other poor readers. If warranted, a recommendation for further testing—vision, hearing, fine motor control (occupational therapy), attention, emotional adjustment—might also be included.

Documentation

The evaluation report should provide the documentation necessary to determine eligibility for special services, including special education. The specific guidelines for determining eligibility are based on federal regulations set forth by IDEA. It is important to note,

however, that the specific criteria, such as cutoff scores for eligibility vary from state to state.

The parent or guardian of a child with dyslexia must advocate for the best possible educational opportunities for that child. Effective advocacy requires understanding the diagnostic report and knowing the child's rights under the law. For additional information on how best to use the evaluation report, please refer to Testing for Dyslexia written by the same authors as this fact sheet. Testing for Dyslexia is the second book in the Basic

Facts Series published by the International Dyslexia Association (IDA). Information on related topics, such as teaching methodologies, accommodations, and instructional modifications are available in other IDA fact sheets.

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